REMARKS

This amendment is submitted in an earnest effort to bring this case to issue without delay.

Applicant wishes to reiterate his claim to the benefit of his Austrian priority date of 24 January 2003 according to the International Convention. A certified copy of Austrian Patent Application A97/2003 filed 24 January 2003 has been made of record as part of Applicant's PCT/AT2004/000011 filed 16 January 2004 of which the instant application is the US National Phase. The Examiner has already acknowledged Applicant's perfected right of priority.

Applicant has canceled claims 1 through 8 and is submitting new claims 9 through 31. Antecedent basis for the new claims may be found in the specification on page 5, line 12 through page 11, line 10. Thus claims 9 through 31 are now in this application and are presented for examination.

In claims 12 through 14, which replace claims 4 through 6, respectively, Applicant no longer refers to "pyrogenic additive or additives" but refers specifically to "pyrogenic oxides". Claim 13, which replaces claim 5 no longer includes the letters "re". Thus none of the objections to the claims has any application to the claims as now presented.

In claim 13, which replaces claim 5, Applicant makes it clear that the synthetic binding agent consists essentially of a synthetic resin (e.g. polyester) intimately mixed with a pyrogenic oxide (e.g. pyrogenic silicic acid) and that within the synthetic binding agent the pyrogenic oxide is present in an amount of 0.05 to 10% with respect to the amount of the synthetic resin present. Applicant believes that claim 13 fully complies with the requirements of 35 USC 112, second paragraph.

The Examiner has rejected claims 1 through 8 under 35 USC 102 as anticipated by WO 81/01857 to GRAY in view of US Patent 4,029,593 to SCHÄPEL et al. The Examiner points to claim 2 of GRAY for its disclosure of a coating powder mixed with hydrophobic silica aerogel in an amount of 0.5 to 3 parts per 100 parts of resin. The silica aerogel disclosed in GRAY may be Aerosil R 972, which is a silica gel made hydrophobic by reaction with an alkyl chlorosilane. The SCHÄPEL et al reference identifies Aerosil R 972 as a pyrogenic silicic acid. Thus the Examiner contends that GRAY anticipates the original claims 1 through 8.

Applicant has canceled original claims 1 through 8 and has submitted new claims 9 through 33, which are narrower and more focused than the original claims, and which are believed to not only distinguish over the GRAY, reference, but which are further believed to patentably distinguish over GRAY.

Im new independent claims 9 and 17 Applicant makes it clear that the new intimately premixed synthetic binding agent for producing powder paints according to the present invention,

consists essentially of a synthetic resin and a pyrogenic oxide of silicon, aluminum, titanium or mixtures thereof having a particle size between 5 and 65 nm. Claim 17 specifies that the synthetic resin is a polyester resin and that the pyrogenic oxide is pyrogenic silicic acid having a particle size of 7 to 10 nm. Applicant points that the synthetic binding agent contains an intimate premixture of the synthetic resin and the pyrogenic oxide and no other essential ingredient. No such intimate premix is either disclosed or suggested in GRAY.

GRAY discloses the application of hydrophobic fumed silica, melt mixed in minor amounts into the coating powders. See page 8, lines 1 to 6 of the reference. As revealed in Example 1 on page 3, line 29 of the reference, melt mixing means the use of an extruder when the dry mixture of synthetic resins (DGEBA epoxy types 3,4,7, epoxy novolac), flow promoter (polyacrylate), hardener (dicyandiamide), catalyst (2-methylimidazole), silica filler, pigments (TiO_2, Cr_2O_3), surfactant and a hydrophobic silica are compounded at elevated temperatures.

Among other hydrophobic forms of silica, the reference discloses on page 2, lines 31 to 37, Aerosil R 972 as a hydrophobic material out of fumed silica with a treated surface.

What is important to note in GRAY is that the synthetic resin, the hydrophobic silica, and all of the other ingredients required to form a powder paint are all mixed together with individual additions of the synthetic resin and the hydrophobic silica to the mixture without formation of an intimate premix

consisting essentially of the synthetic resin and the pyrogenic oxide such as the hydrophobic silicic acid.

On the contrary to what is disclosed in the prior art, including GRAY, the presently claimed invention covers an admixture of pyrogenic oxides, preferably pyrogenic silicic acid, in particular Aerosil, with a synthetic resin, such as a polyester resin, used for preparing a synthetic binding agent for a coating powder for powder paint coatings. Thus the invention as now claimed is directed to an intimately premixed synthetic bonding agent consisting essentially of a synthetic resin and a pyrogenic oxide of silicon, aluminum, titanium or iron, and not a powder coating composition comprising melt mixing minor amounts of fumed silica into the coating powders. As a result of the fact that Applicant alone first prepares an intimately premixed synthetic binding agent consisting essentially of a synthetic resin and a pyrogenic oxide of silicon, aluminum, titanium or iron, and then combines this intimately premixed synthetic binding agent with the remaining ingredients necessary to form a powder paint, Applicant obtains a surprisingly superior result in terms of the quality of the resulting powder paint and the coat or coating applied to a variety of substrates.

In the paragraph bridging pp 4 and 5 of the present application, Applicant describes the drawbacks and shortcomings of the prior art in this field, including GRAY or GRAY combined with SCHÄPEL et al. Surface defects develop in the powder paint coatings according to the prior art as well as a slight crinkling which appears as a reduced shine or glossiness, as well as a noticeably poorer flow property.

The presently claimed invention has advantages over the prior art as described in the present application on page 5, line 12 through page 6, line 3. The powder paints prepared according to the present invention using Applicant's intimately premixed synthetic binding agent to prepare the paint have a much better distribution than the powder paints obtained according to the prior art without the formation of the intimate premixture. The specification continues further down page 6 to explain that the superior result attributable to Applicant's formation of the synthetic binding agent that is an intimate premixture consisting essentially of the polymer resin and the pyrogenic oxide.

Starting on page 10, line 9 of the present application, and continuing through to page 12, Applicant sets forth some directly comparative test data. The data include "Powder Paint A not Invention", "Powder Paint B, not Invention" and "Powder Paint Invention." The example designated "Powder Paint B, not Invention" is representative of the invention disclosed in GRAY. The composition includes a resin (Resin 1), a hardener (Primid XL 552), flow promoters (Byk 365; Benzoine), pigments (Heucodur Yellow G

9239, Bayferrox 130B, Heliogen Green L 8731, Titan 2310), filler (Portaryte B 10) and Aerosil 200 are intimately premixed (dry mixture) and then extruded. Sed page 11, lines 1 through 5 of the present application.

In the "Powder Paint of the Invention" according to page 10, line 9 of the present application, right hand column, materials are used to prepare the powder paint, that are the same materials used to prepare the prior art powder paint. But instead of a conventional polyester resin, such as the resin used in "Powder Paint B", the inventive Polyester Resin 2 is used, an intimate mixture of polyester resin and pyrogenic silicic acid (Aerosil 200), while the addition of Aerosil 200 as a separate component has been omitted. Unlike Powder Paint A and Powder Paint B, which both require a separate addition of the Aerosil 200, Powder Paint of the Invention already contains the respective quantity of Aerosil 200, which has been added to the polyester resin to form an intimately mixed synthetic binding agent before the subsequent mixing and extruding of the remaining constituents necessary to form the powder paint takes place. Forming this intimately mixed synthetic binding agent consisting essentially of the synthetic resin and the pyrogenic oxide according to the present invention (Resin 2), which is not formed according to the prior art, is the important difference between the present invention and the powder prepared according to GRAY using an individual synthetic resin (Resin 1) and an individual pyrogenic oxide with no intimate premixture.

The example on page 9, line 15 to page 10, line 5 discloses the preparation of the intimately premixed synthetic binding agent broadly claimed in claim 9 and the claims dependent thereon and more narrowly claimed in claim 17 and the claims dependent thereon. Claim 17 and the claims dependent thereon are especially believed to be patentably distinguishable over the cited prior art.

Pages 11 and 12 of the present application set forth the results of the directly comparative tests between the Powder Paints A and B according to the Prior art and the Powder Paint of the Invention. Since Powder Paint A contains no pyrogenic oxide, this powder paint is further removed from the presently claimed invention than is Powder Paint B, which Applicant regards as the closest prior art. According to the results set forth on pages 11 and 12 of the application, where the powder coatings are visually analyzed using Powder Paint B of the prior art and Powder Paint of the Invention, the presently claimed Powder Paints which are prepared with the presently claimed intimately premixed synthetic binding agents showed superior results. In each case the respective powder paint of the prior art and according to the invention was applied to a chromate-treated aluminum sheet of a thickness of 0.7mm and baked for 10 minutes at 200° C in a circulating furnace.

The comparative visual results for the coating applied using the powder paint of the present invention, resulted in a coating on the aluminum substrate with no craters, a very good

shine, and good flow coverage with a rating of 8. The prior art coating using the powder paint of GRAY had hardly any craters, slight crinkling (reduced shine) and a flow coverage rating of only 6.

Applicant also conducted a comparative water spot test between the coated aluminum substrates according to the presently claimed invention and according to the prior art. The results are shown on page 12 of the application and indicate that coating of the aluminum substrate with the Powder Paint C (Powder Paint of the Invention) had superior color retention with less lightning than did the coating with Powder Paint B of the prior art.

In view of the above directly comparative showing Applicant believes that all claims now presented directed to the intimately premixed synthetic binding agent, powder paint and coat or coating comprised of the powder paint are patentably distinguishable over the cited prior art. Applicant especially believes that the intimately premixed synthetic binding agent of claims 17 through 19, the powder paints of claims 23 through 25, and the coat or coating of claims 19, 30 and 31 are patentable over the cited prior art since these claims are very well supported by the directly comparative showing in the present application between the prior art Powder Paint B and the Powder Paint of the Invention wherein the presently claimed invention showed surprisingly and significantly superior results.

Applicant believes that all claims now presented are allowable and a response to that effect is earnestly solicited.

K.F. Ross P.C.

/Jonathan Myers/

By: Jonathan Myers, 26,963
Attorney for Applicant

29 May 2008
5683 Riverdale Avenue Box 900
Bronx, NY 10471-0900
Cust. No.: 535
Tel: 718 884-6600
Fax: 718 601-1099
Email: *email@kfrpc.com*